

DRAFT
Modification of Diversion Timing Patterns

Description

Modification of diversion patterns would consist of shifting the seasonal pattern (i.e., timing) of diversions to allow higher instream flows or reduced entrainment effects during periods when instream flow requirements for fish habitat are most important or when fish life stages are most vulnerable to diversions. A shift in diversion timing is more feasible if water can be stored offstream after diversion. For example, the San Luis Reservoir storage capacity is used to allow the pumping timing pattern to be shifted relative to the demand pattern. As another example, the Best Available Technology (BAT) portions of the National Pollutant Discharge Elimination System (NPDES) permits for Pacific Gas & Electric (PG&E) Pittsburgh and Contra Costa power plants includes reduced diversions and possible shifting of diversions to the power plant. The Los Vaqueros reservoir project involves modified diversion patterns (i.e., increase diversions during periods with low salinity) to improve Contra Costa Water District's drinking water quality. Because the reservoir allows a modified diversion pattern relative to demands, fish mitigation measures that reduce diversions during spring to provide entrainment protection for vulnerable life stages of fish are included.

This category includes the following actions:

- modify diversion timing of in-Delta diversions,
- modify diversion timing of export diversions,
- coordinate State Water Project (SWP)/Central Valley Project (CVP) diversion timing,
- modify diversion timing of Contra Costa Canal (CCC) and North Bay Aqueduct (NBA),
- modify diversion timing at PG&E power plants,
- modify diversion timing through Montezuma salinity control gate (SCG), and
- use real-time monitoring and adaptive management.

Purpose

The purpose of modification of diversion patterns is to provide fish with enhanced habitats and protection from entrainment without reducing the total allowable diversion volume available for achieving water supply benefits.

Constraints

Diversion facilities have generally been sized to allow the maximum seasonal demand to be obtained from a river or the Delta. Diversion or pumping capacity limits diversion patterns. Adding pumping or diversion capacity may be expensive. The recent installation of additional pumps at the SWP pumping plant could allow increased pumping capacity relative to historic patterns with reduced impacts to fish; however, concerns with south Delta channel flows and stages need to be resolved.

Linkage to Other CALFED Action Categories

Providing additional storage can facilitate the separation of diversion schedules from demand schedules. Additional diversion pumping capacity (or additional permitted rates) may also be needed to facilitate modification of diversion timing patterns.